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CLEAN COPY OF PENDING CLAIMS

1	1. (Amended) A system comprising:
2	a plurality of labels generating identifiable spectra in response to excitation
3	energy, wherein at least some of the spectra comprise a plurality of signals for each label, the
4	plurality of signals defining a plurality of wavelengths, the wavelengths from the spectra being
5	intermingled; and
6	a detector simultaneously imaging at least some of the spectra upon a surface for
7	identification of the labels.
1	3. (Amended) The system of claim 1, wherein the labels comprise at least
2	one semiconductor nanocrystal.
1	4. (As filed) The system of claim 2, wherein each label comprises at
2	least one population of semiconductor nanocrystals, each population generating a signal having a
3	population wavelength in response to the excitation energy.
1	5. (As filed) The system of claim 4, wherein at least some of the labels
2	comprise a plurality of the populations supported by a matrix.
1	6. (As filed) The system of claim 1, further comprising at least one
2	probe body including a label and an associated assay indicator marker, the indicator markers
3	generating indicator signals in response to an interaction between the probe body and an
4	associated test substance so as to indicate results of an assay.
1	7. (As filed) The system of claim 1, wherein the simultaneously imaged
2	labels are distributed across a two-dimensional sensing field.
1	8. (As filed) The system of claim 7, wherein the detector comprises a
2	diffractor and a sensor, and wherein each label is sufficiently smaller than the sensing field so

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that the spectra can be wavelength-dispersed by the diffractor without excessive overlap of the 3 4 dispersed spectra upon the sensor. 1 9. (As filed) The system of claim 1, wherein the detector comprises a light sensor and a diffractor, the diffractor disposed between the sensing field and the light 2 sensor, the sensor simultaneously sensing the spectra from the plurality of labels. 3 10. The system of claim 9, wherein an open optical path (As filed) 1 2 extends from the sensing field to the diffractor and from the diffractor to the sensor, the sensor comprising an areal sensor, the open optical path having an open cross-section with significant 3 4 first and second open orthogonal dimensions. 1 11. (As filed) The system of claim 10, wherein no slit aperture is 2 disposed along the optical path to restrict the sensing field, and wherein the diffractor comprises 3 an element selected from the group consisting of a prism, a dispersive reflective grating, and a 4 dispersive transmission grating. The system of claim 1, further comprising a spatial position 12. (Amended) 1 indicator to identify label positions within a sensor field of the detector, wherein the detector 2 3 senses relative spectral data. 13. (As filed) The system of claim 12, further comprising a spectral 1 analyzer coupled to the label position indicator and the detector, the analyzer deriving absolute 2 3 wavelengths of the spectra in response to the relative spectral data and the identified label 4 positions. 1 14. (As filed) The system of claim 13, further comprising a first beam splitter disposed to optically couple the label position indicator with the sensing filed along a 2 3 positioning optical path, and to optically couple the detector with the sensing field along a 4 spectral optical path.

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1	15. (As filed) The system of claim 14, wherein the detector comprises an
2	areal sensor and wherein the label position indicator comprises a processing module, the first
3	beam splitter directing a first energy from the sensing field, past a diffractor and toward the areal
4	sensor for generating spectral data, the first beam splitter directing a second energy from the
5	sensing field to a position indicator for generation of position data.
1	16. (As filed) The system of claim 13, further comprising a second beam
2	splitter disposed along an optical path from the sensing field, wherein a first dispersion member
3	is disposed in the spectral optical path so as to disperse wavelengths of the spectra along a first
4	axis, and wherein a second dispersion member is optically coupled to the second beam splitter so
5	as to disperse wavelengths of the spectra along a second axis, the first axis at an angle to the
6	second axis relative to the sensing field for resolving spectral ambiguities of overlapping
7	wavelengths along the first axis.
1	17. (Amended) The system of claim 1 wherein the detector comprises
2	means for distributing the signals across a sensor in response to wavelengths of the signals and
3	positions of the labels in [the] a sensor field, the distributing means disposed between the sensing
4	field and the sensor.
1	18. (As filed) The system of claim 17, further comprising means for
2	determining positions of the labels within the sensing field, and a spectral analyzer coupled to the
3	positioning means and the sensor, the analyzer determining the spectra.
1	19. (As filed) The system of claim 18, wherein the positioning means
2	comprises either an areal sensor and a beam splitter, or a calibration reference signal within the
3	at least some spectra.

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l	58. (New) A system comprising.
2	a plurality of labels generating identifiable spectra in response to excitation
3	energy, wherein at least some of the spectra comprise a plurality of signals for each label;
4	a detector simultaneously imaging the spectra upon a surface of a sensor for
5	identification of the labels, the detector comprising a dispersion member dispersing wavelengths
6	of the spectra across the surface of the sensor; and
7	a spatial position indicator to identify label positions within a sensor field of the
8	detector.

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